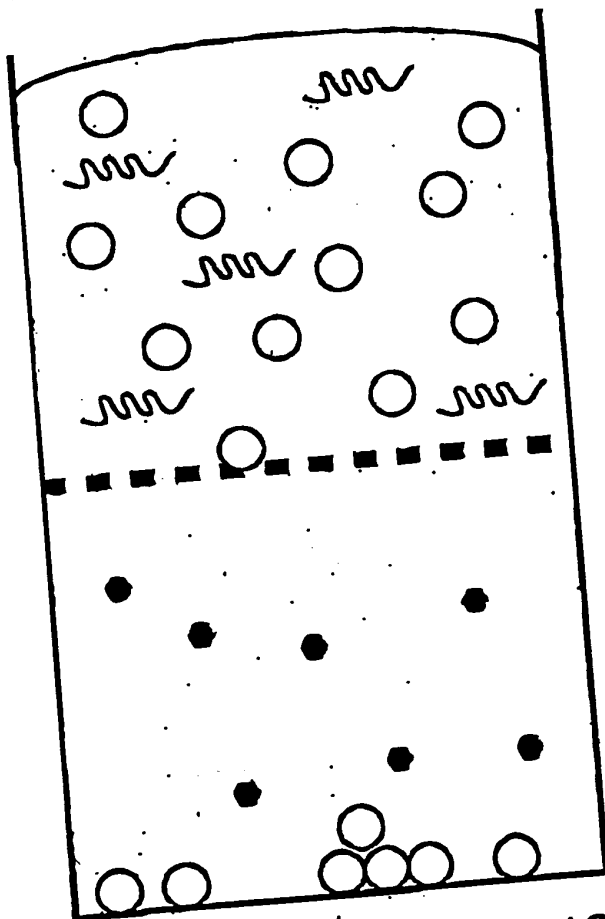


TOP COMPARTMENT



LOWER COMPARTMENT

FIGURE 1

Effect of Peptide 3 with MCP-1 (50ng/ml)

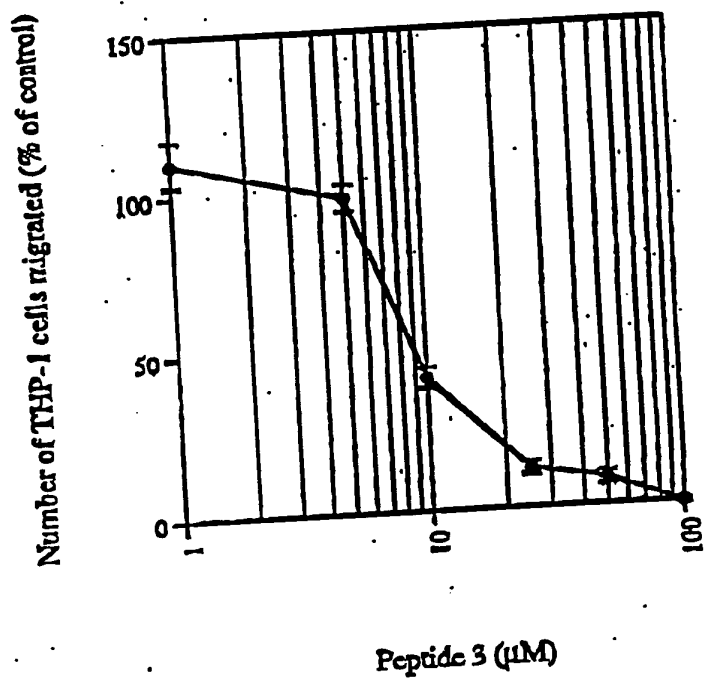


FIGURE 2

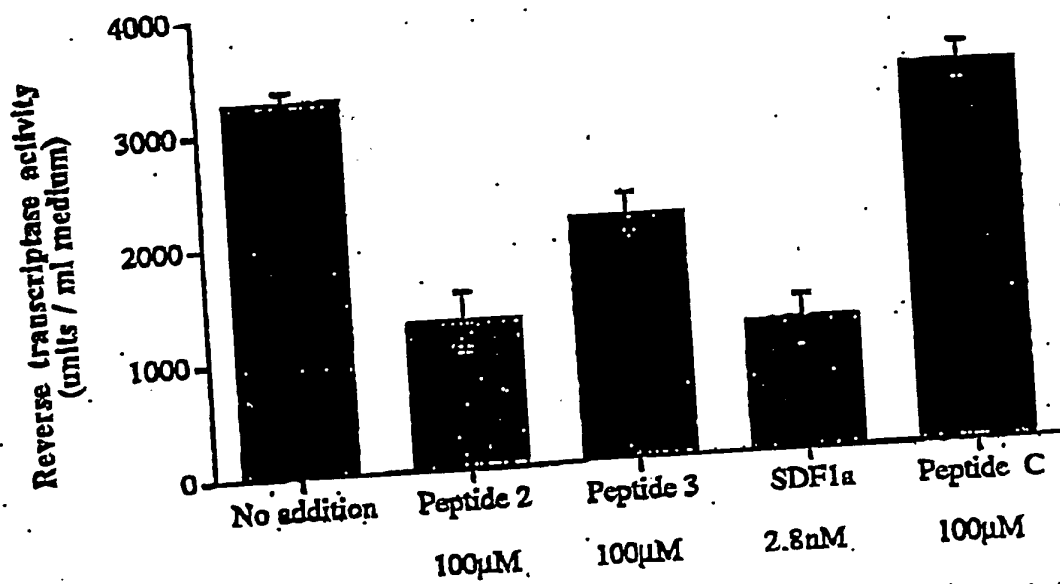
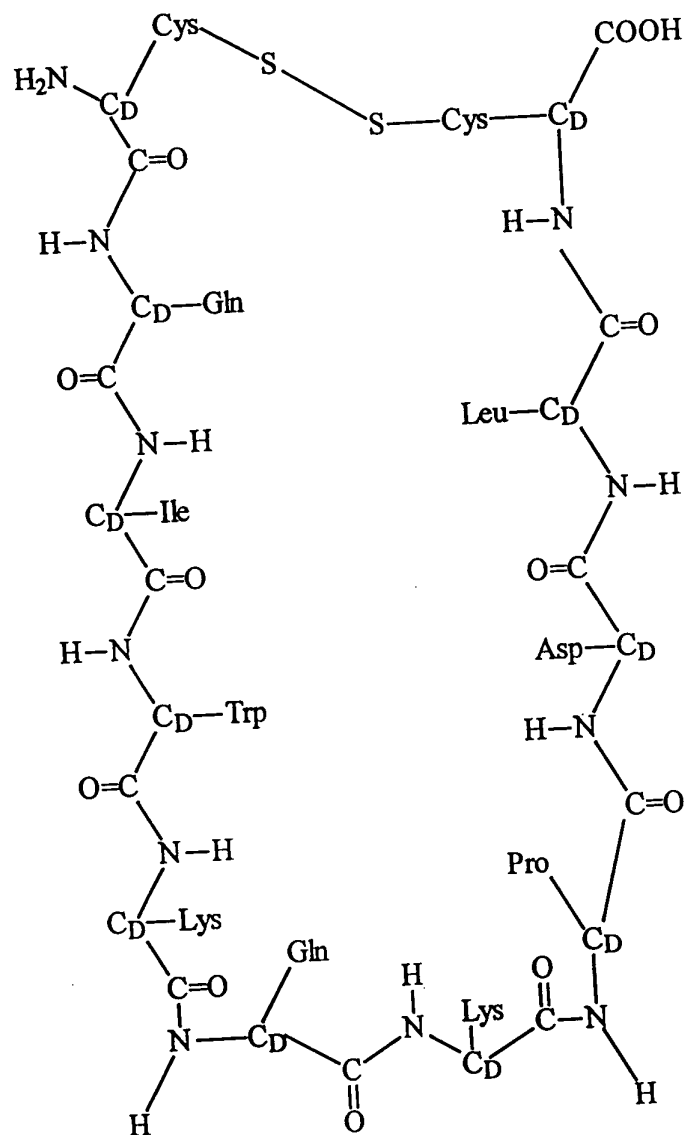


FIGURE 3



**FIGURE 4**

Receptor

capillary blood vessel

phagocyte (inflammatory cell)

leukocyte adhesion and migration

site of inflammation, tissue damage and immune reactions

## Figures

# TARGET FOR VIRAL ENTRY (HIV VIRUS)

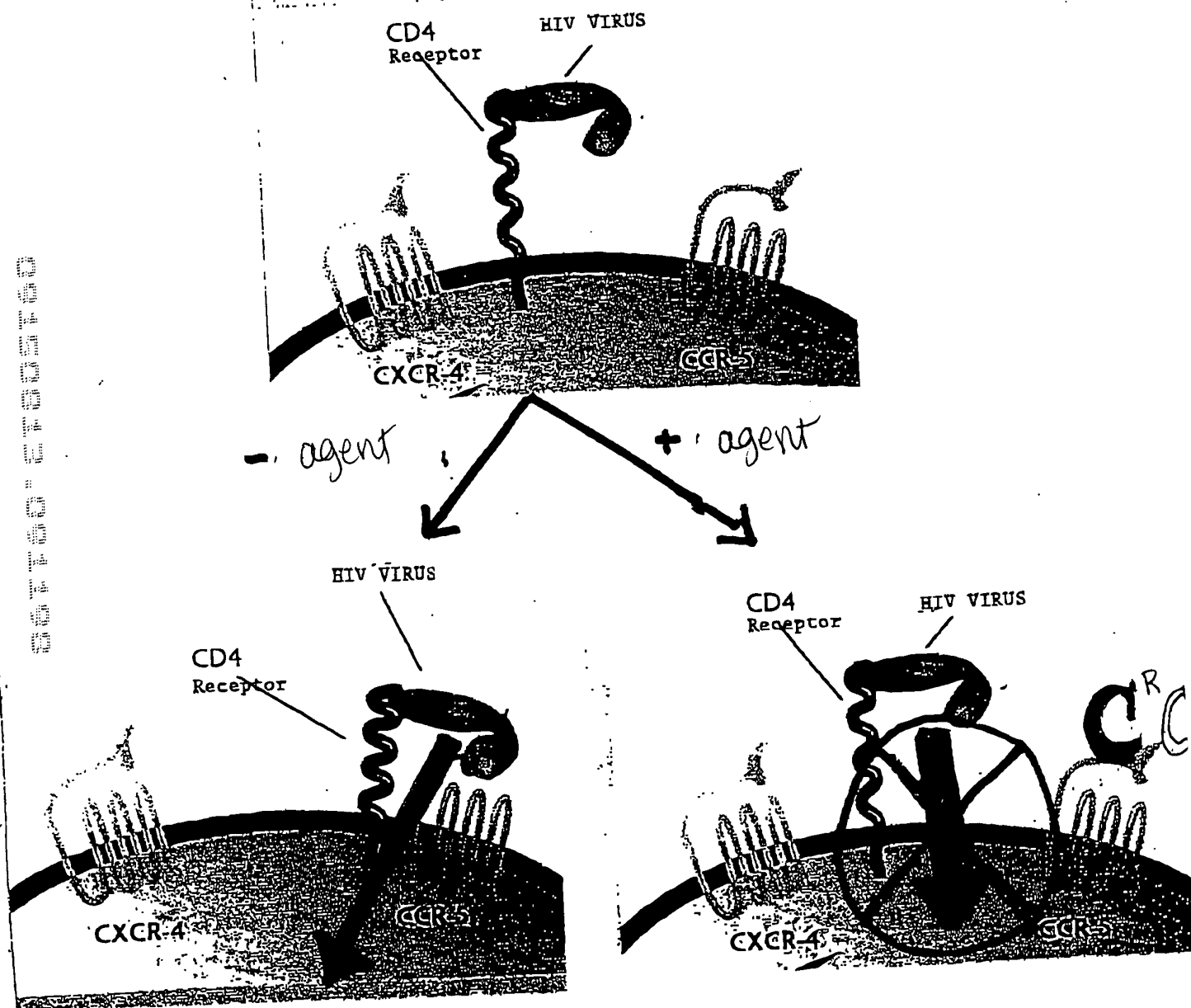
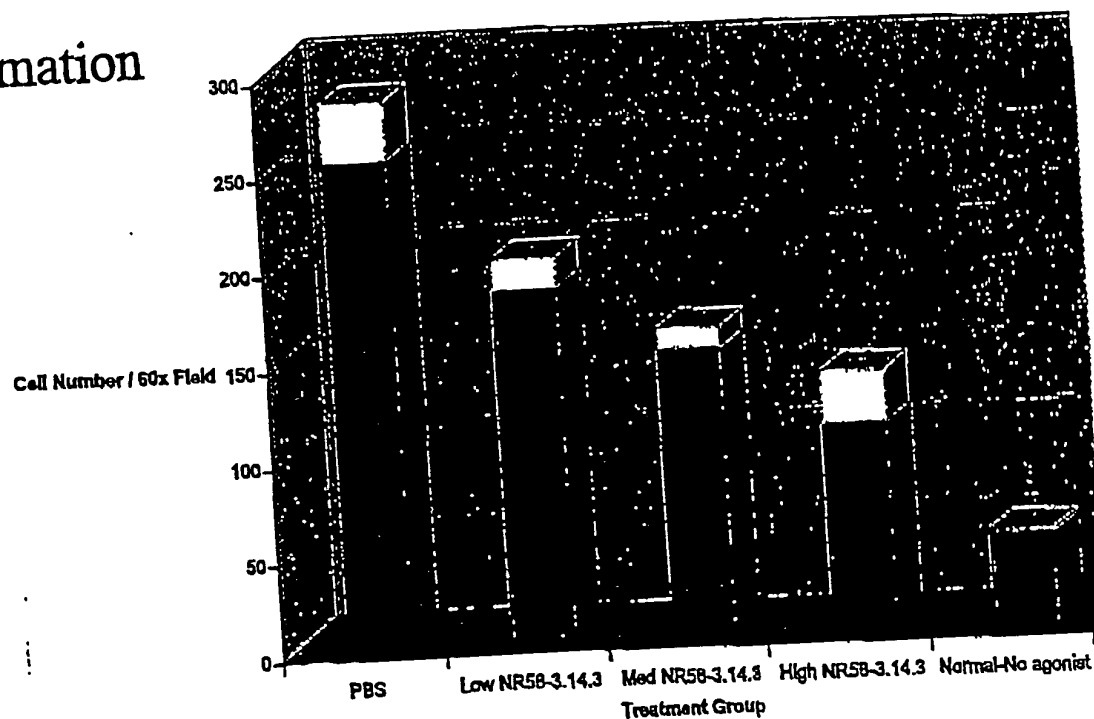


Figure 6

## Skin Inflammation Model



## Endotoxemia Model

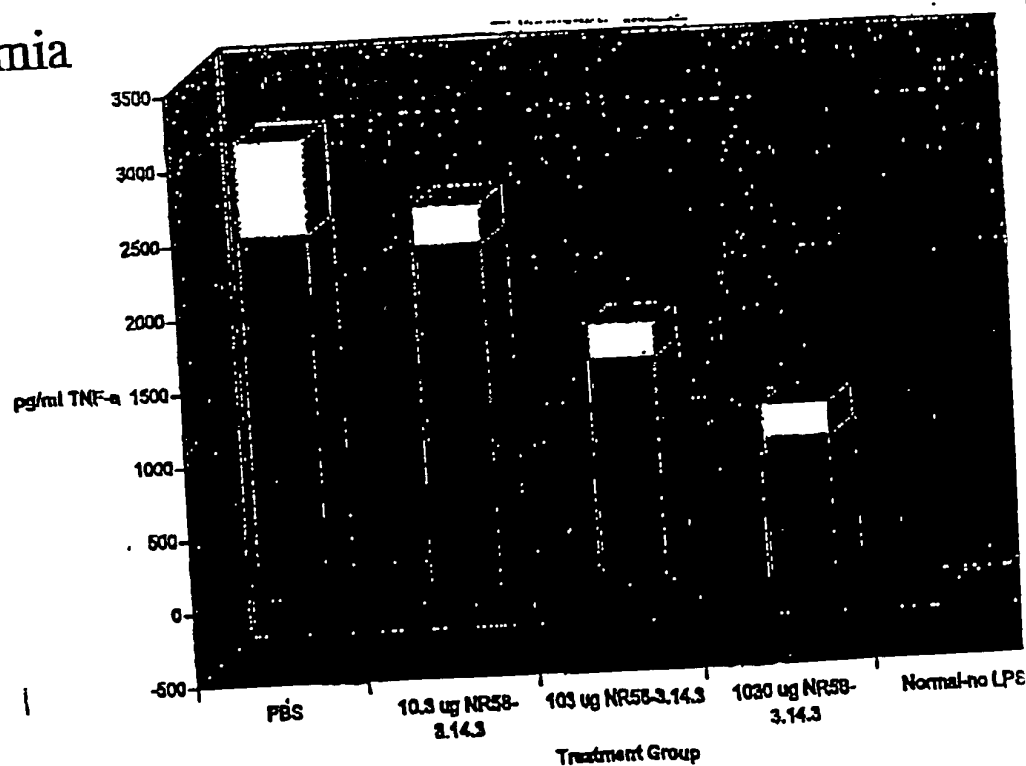


Figure 7

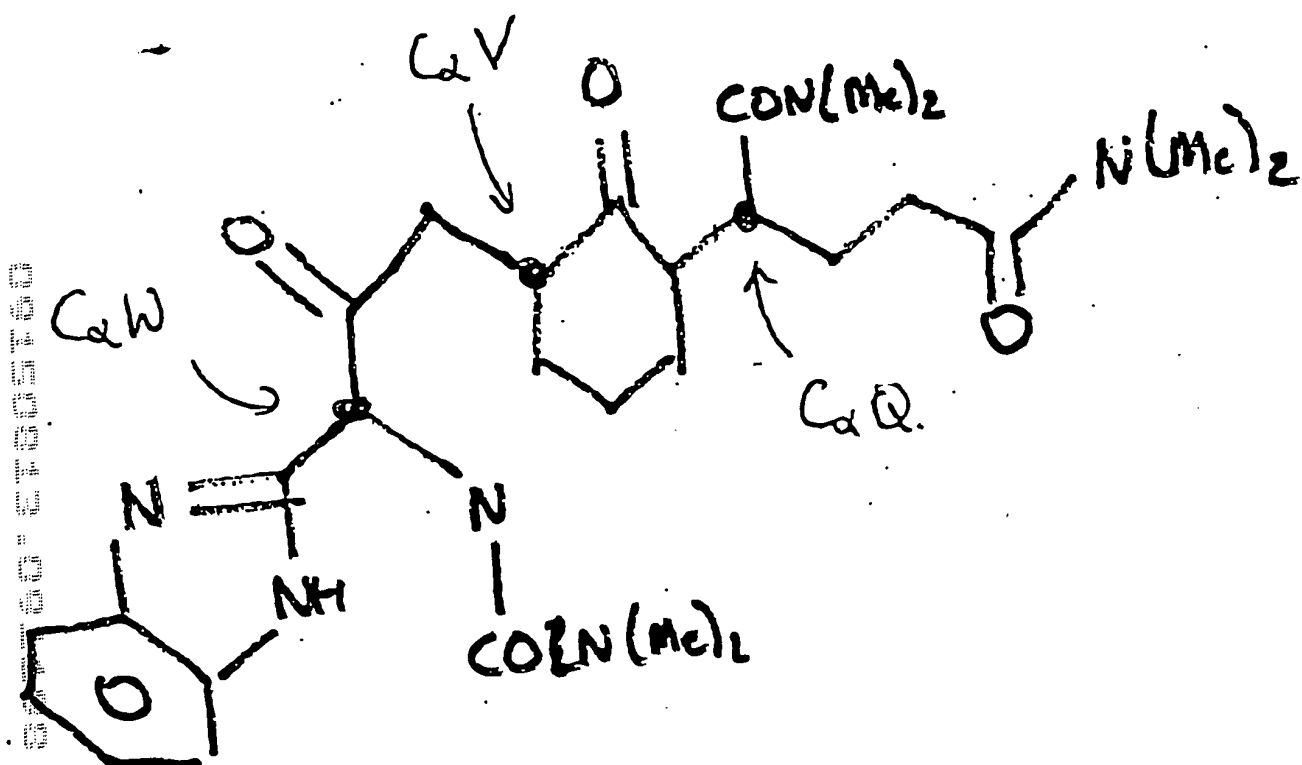


Figure 8



NUMBER OF MACROPHAGES  
(Arbitrary units)

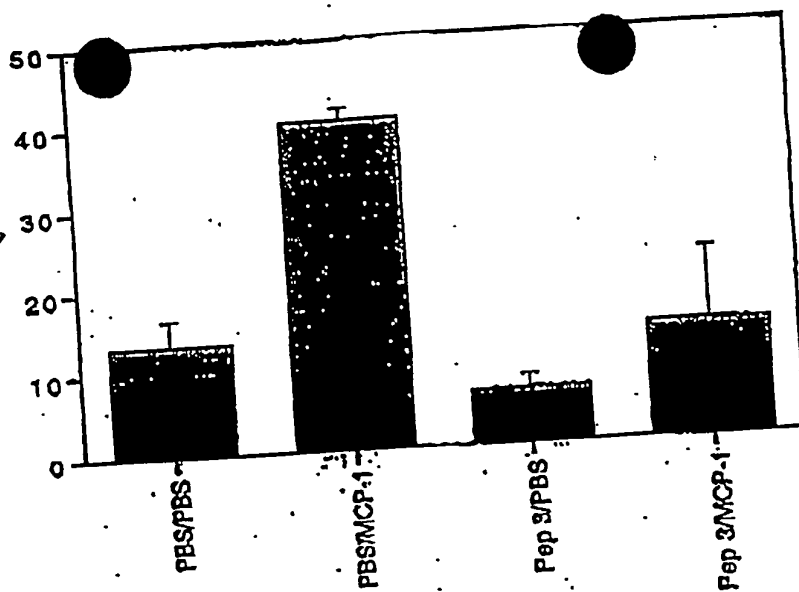


Figure X  
9

NUMBER OF B-CELLS  
(Arbitrary units)

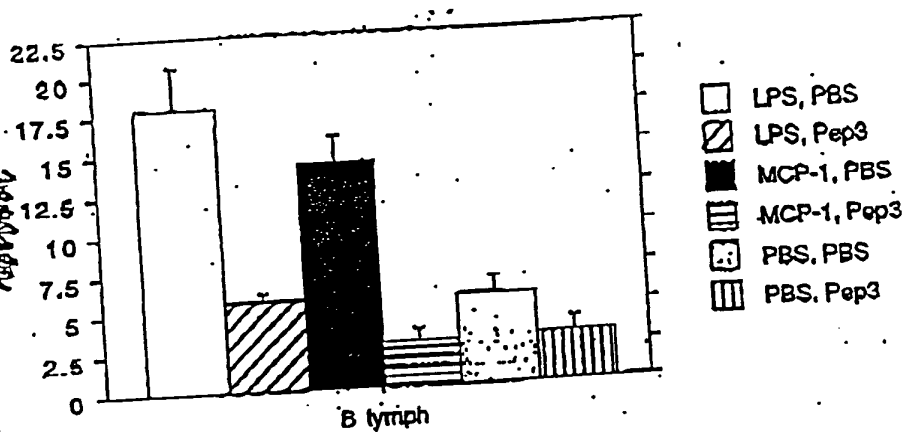


Figure X<sub>10</sub>

# ● TAP-1 cell in m● 7-TRD1C HIV

FRACTION  
OF  
CELLS  
INFECTED  
(infected / total cells)

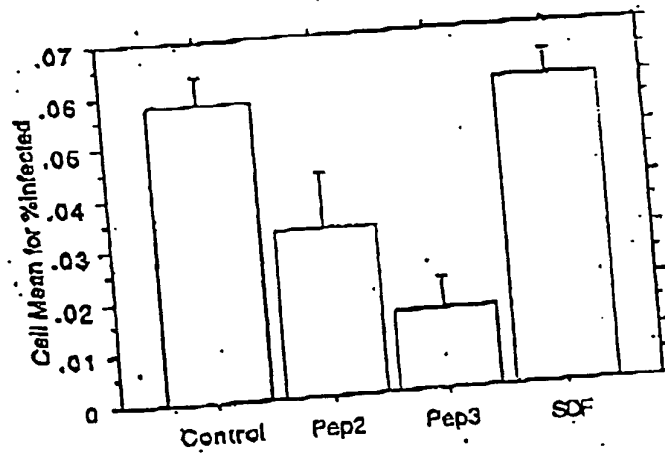


Figure 2 11

Figure 12

<u>Amino Acid</u>	<u>Codon</u>
Phe	UUU, UUC
Ser	UCU, UCC, UCA, UCG, AGU, AGC
Tyr	UAU, UAC
Cys	UGU, UGC
Leu	UUA, UUG, CUU, CUC, CUA, CUG
Trp	UGG
Pro	CCU, CCC, CCA, CCG
His	CAU, CAC
Arg	CGU, CGC, CGA, CGG, AGA, AGG
Gln	CAA, CAG
Ile	AUU, AUC, AUA
Thr	ACU, ACC, ACA, ACG
Asn	AAU, AAC
Lys	AAA, AAG
Met	AUG
Val	GUU, GUC, GUA, GUG
Ala	GCU, GCC, GCA, GCG
Asp	GAU, GAC
Gly	GGU, GGC, GGA, GGG
Glu	GAA, GAG

FIGURE 13

Original Residue	Exemplary Substitutions	Preferred Substitutions
Ala (A)	val; leu; ile	val
Arg (R)	lys; gln; asn	lys
Asn (N)	gln; his; lys; arg	gln
Asp (D)	glu	glu
Cys (C)	ser	ser
Gln (Q)	asn	asn
Glu (E)	asp	asp
Gly (G)	pro	pro
His (H)	asn; gln; lys; arg	arg
Ile (I)	leu; val; met; ala; phe norleucine	leu
Leu (L)	norleucine; ile; val; met; ala; phe	ile
Lys (K)	arg; gln; asn	arg
Met (M)	leu; phe; ile	leu
Phe (F)	leu; val; ile; ala	leu
Pro (P)	gly	gly
Ser (S)	thr	thr
Thr (T)	ser	ser
Trp (W)	tyr	tyr
Tyr (Y)	trp; phe; thr; ser	phe
Val (V)	ile; leu; met; phe; ala; norleucine	leu

## FIGURE 14

### Peptide 3

LFL peptide 3(1-12)[MCP-1]: Residues 50-61 of mature hMCP-1  
E-I-C-A-D-P-K-Q-K-W-V-Q  
L amino acids

LFL peptide 3(3-12)[MCPI] Residues 52-61 of mature hMCP-1  
C-A-D-P-K-Q-K-W-V-Q  
L amino acids

LFL peptide 3(1-6)[MCP1]: residues 50-55 of mature hMCP-1  
E-I-C-A-D-P  
L amino acids

LFL peptide 3(7-12)[MCP1]: Residues 56-61 of mature hMCP-1  
K-Q-K-W-V-Q  
L amino acids

LFL Leu<sub>4</sub>peptide3(1-12)[MCP-1]  
E-I-C-L-D-P-K-Q-K-W-V-Q  
L amino acids

LFL Ser<sub>7</sub>peptide3(1-12)[MCP-1]  
E-I-C-A-D-P-S-Q-K-W-V-Q  
L amino acids

LFL Ile<sub>11</sub>peptide3(1-12)[MCP-1]  
E-I-C-A-D-P-K-Q-K-W-I-Q  
L amino acids

LFL Leu<sub>4</sub>Ile<sub>11</sub>peptide3(1-12)[MCP-1]  
E-I-C-L-D-P-K-Q-K-W-I-Q  
L amino acids

CFL Cys<sub>0</sub>Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub>peptide3(1-12)[MCP-1]  
C-E-I-C-L-D-P-K-Q-K-W-I-Q-C  
L amino acids

LRD Leu<sub>4</sub>Ile<sub>11</sub> peptide 3(1-12)[MCP-1]  
q-i-w-k-q-k-p-d-l-c-i-e  
D amino acids

CRD Cys<sub>0</sub>Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub>peptide 3(1-12)[MCP-1]  
c-q-i-w-k-q-k-p-d-l-c-i-e-c  
D amino acids

LFL Ser<sub>7</sub>Glu<sub>8</sub>Glu<sub>9</sub>peptide3(1-12)[MCP1]:Residues 50-61 of mature hMIP1 $\alpha$   
E-I-C-A-D-P-S-E-E-W-V-Q  
L amino acids

LFL peptide3(10-12)[MCP-1]  
W-V-Q  
L amino acids

CFL Cys<sub>0</sub>Cys<sub>4</sub> peptide3(10-12)[MCP-1]  
C-W-V-Q-C  
L amino acids

LRD peptide3(10-12)[MCP-1]  
q-v-w  
D amino acids

LFL peptide3(7-9)[MCP-1]  
K-Q-K  
L amino acids

LRD peptide3(7-9)[MCP-1]  
k-q-k  
D amino acids

LFL peptide 3(7-9)[MIP1 $\alpha$ ](MIP1 $\alpha$  specific inhibitor)  
S-E-E  
L amino acids

LRD peptide3(7-9)[MIP1 $\alpha$ ] (MIP1 $\alpha$  specific inhibitor)  
e-e-s  
D amino acids

LFL peptide3(7-9)[IL-8](IL-8 specific inhibitor)  
K-E-N  
L amino acids

LRD peptide3(7-9)[IL-8](IL-8 specific inhibitor)  
n-e-k  
D amino acids

LFL peptide<sub>3(7-9)</sub>[SDF-1 $\alpha$ ](SDF-1 $\alpha$  specific inhibitor)  
K-L-K  
L amino acids

LRD peptide<sub>3(7-9)</sub>[SDF1 $\alpha$ ] (SDF-1 $\alpha$  specific inhibitor)  
k-l-k  
D amino acids

LFL Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub> peptide<sub>3(3-12)</sub>[MCP-1]  
L-D-P-K-Q-K-W-I-Q-C  
L amino acids

CRD Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub> peptide<sub>3(3-12)</sub>[MCP-1]  
c-q-i-w-k-q-k-p-d-l-c  
D amino acids

<sup>3</sup>H-Ala CRD-Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub> peptide<sub>3(3-12)</sub>[MCP-1](D-Ala attached to Asp residue of CRD-Leu<sub>4</sub>Ile<sub>11</sub>Cys<sub>13</sub> peptide<sub>3(3-12)</sub>[MCP-1])

<sup>3</sup>H-L-Leu LRD Cys<sub>13</sub> peptide<sub>3(3-12)</sub>[MCP-1]  
c-q-i-w-k-q-k-p-d-L-c  
D and L amino acids

LFL SES  
S-E-S  
L amino acids

LFL KKK  
K-K-K  
L amino acids

LFL Cys<sub>4</sub> peptide<sub>3(10-12)</sub>[MCP-1]  
W-V-Q-C  
L amino acids

LRD Cys<sub>4</sub> peptide<sub>3(10-12)</sub>[MCP-1]  
c-q-v-w  
D amino acids

LFL Ile<sub>11</sub>Cys<sub>13</sub>peptide<sub>3(10-12)</sub>[MCP-1]  
W-I-Q-C  
L amino acids



LRD Cys<sub>13</sub>Ile<sub>11</sub>peptide3(10-12)[MCP-1]

cqiw

D amino acids

LRD peptide3(7-12)[MCP-1]

q-v-w-k-q-k

D amino acids

CFL Cys<sub>0</sub>Cys<sub>13</sub>peptide3(7-12)[MCP-1]

C-K-Q-K-W-V-Q-C

L amino acids

CRD Cys<sub>0</sub>Cys<sub>13</sub>peptide3(7-12)[MCP-1]

c-q-v-w-k-q-k-c

D amino acids

LFL peptide3(10-12)[RANTES]

WVR

L amino acids

LRD peptide3(10-12)[RANTES]

rvw

D amino acids

LFL peptide3(10-12)[SDF-1]

W-I-Q

L amino acids

## Peptide 2

LFL peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1

S-Y-R-R-I-T-S-S-K-C-P-K-E-A-V

L amino acids

CFL Cys<sub>0</sub>Cys<sub>16</sub>peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1

C-S-Y-R-R-I-T-S-S-K-C-P-K-E-A-V-C

L amino acids

LRD peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1

v-a-e-k-p-c-k-s-s-t-i-r-r-y-s

D amino acids

CRD Cys<sub>0</sub>Cys<sub>16</sub>peptide 2(1-15)[MCP-1]: Residues 28-42 of hMCP-1  
c-v-a-e-k-p-c-k-s-s-t-i-r-r-y-s-c  
D amino acids

LFL peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1 $\beta$   
H-L-K-I-L-N-T-P-N-C-A-L-Q-I-V  
L amino acids

CFL Cys<sub>0</sub>Cys<sub>16</sub>peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1 $\beta$   
C-H-L-K-I-L-N-T-P-N-C-A-L-Q-I-V-C  
L amino acids

LRD peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1 $\beta$   
v-i-q-l-a-c-n-p-t-n-l-i-k-l-h  
D amino acids

CRD Cys<sub>0</sub>Cys<sub>16</sub>peptide 2(1-15)[SDF1]: Residues 26-40 of mature hSDF-1 $\beta$   
c-v-i-q-l-a-c-n-p-t-n-l-i-k-l-h-c  
D amino acids

LFL peptide 2(1-14)[MIP-1 $\alpha$ ]: Residues 28-41 of hMIP-1 $\alpha$   
D-Y-F-E-T-S-S-Q-C-S-K-P-G-V  
L amino acids

LRD peptide 2(1-14)[MIP1 $\alpha$ ]: Residues 28-41 of mature hMIP1 $\alpha$   
v-g-p-k-s-c-q-s-s-t-e-f-y-d  
D amino acids

LFL peptide 2(1-16)[IL8]: Residues 27-42 of mature hIL8  
E-L-R-V-I-E-S-G-P-H-C-A-N-T-E-I  
L amino acids

LFL Peptide 2(1-10)[MCP-1]: Residues 28-37 of hMCP-1  
S-Y-R-R-I-T-S-S-K-C  
L amino acids

LFL peptide 2(10-15)[MCP-1]: Residues 37-42 of hMCP-1  
C-P-K-E-A-V  
L amino acids

LFL peptide 2(1-5)[MCP-1]: Residues 28-32 of hMCP-1  
S-Y-R-R-I  
L amino acids



2025-03-26

Figure 15

Sequence	DARC Binding	THP-1 Migration		
		MCP-1	MIP-1α	SDF-1α
SYRRITSSKCPKEAV	350 nM	ns	ns	ns
vaekpckstirrys	18 μM	ns	ns	ns
SYRRITSSK	22 μM	ns	ns	ns
SYRRI	>100 μM	ns	ns	ns
TSSKC	>100 μM	ns	ns	ns
CPKEAV	>100 μM	10 μM	40 μM	7 μM
HLKILNTPNCALQIV	19 μM	ns	ns	ns
DYFETSSQCSKPGV	>100 μM	ns	ns	ns
vqpkscqsstefyd	>100 μM	ns	ns	ns
DYFETSSQC	>100 μM	ns	ns	ns
CSKPGV	>100 μM	ns	ns	ns

Sequence	Mol Wt.		Duffy Binding	MCP-1 ED-50	MIP-1α ED-50	RANTES ED-50	SDF-1α ED-50	IL-8 ED-50	Other Data
AQPDAINAPVTCC	1302		90μM	ns	ns	-	ns	ns	
SYRRITSSKCPKEAV	1725		100nM	ns	ns	-	ns	-	
vaekpckastirrtys	1725		18μM	ns	ns	-	ns	-	
HLKTIATPNCALQIV	1677.3		19μM	10μM	40μM	-	7μM	-	
DYFETSSQCSKPGV	1549		>100μM	ns	ns	-	ns	-	
vppkscqgsteleyd	1549		>100μM	ns	ns	-	ns	-	
SYRRITSSK	1097.4		22μM	ns	ns	-	ns	-	
CPKEAV	645.8		>100μM	ns	ns	-	ns	-	
SYRRI	693.9		>100μM	ns	ns	-	ns	-	
TSSK	525.7		>100μM	ns	ns	-	ns	-	
DYFETSQC	1079.2		>100μM	ns	ns	-	ns	-	
CSKPGV	589.8		>100μM	ns	ns	-	ns	-	

Figure 16

EICADPKQKVVQ	1445		6μM	8μM	7.5μM		13.5μM	10μM	
CADPKQKVVQ	1202		-	8μM	6.5μM	-	9μM	8.5μM	
cgvkwakpdc	1305		3μM	100nM	-	-	-	-	
cgvkwakpdc	1305		40μM	30nM	-	-	-	-	
EICADP	647		-	25μM	20μM	-	18.5μM	16μM	
KQKVVQ	816		15μM	7μM	5μM	-	5.5μM	5μM	
EICLDPKQKVVQ	1487		-	8μM	7μM	-	2.5μM	3μM	
EICADPSQKVVQ	1404		25μM	7μM	5.5μM	-	4μM	3μM	
EICADPKQKVVQ	1459		-	5.5μM	35μM	-	7μM	2μM	
EICLDPKQKVVQ	1501		90μM	2μM	2μM	-	4μM	3.5μM	
WVQ	431.5		1μM	8μM	7.5μM	1.5μM	2.25μM	1μM	
KQK	464.5		50μM	7μM	>100μM	>100μM	>100μM	>100μM	
SHE	399.4		>100μM	>100μM	-	>100μM	>100μM	>100μM	
KEN	425.4		>100μM	>100μM	>100μM	>100μM	>100μM	-	

00760-2703760

KIK	516.6		>100µM	>100µM	>100µM	-	>100µM	
cqiwkqkpdle	1359		>100µM	1nM	-	350nM	10nM	Note 1
cqiwkqkpdle	1448		-	>100µM	-	-	-	Note 2
cqiwkqkpdle	1472.2		-	10nM	-	-	-	
SES	357.3		>100µM	>100µM	-	-	-	
KIK	609.8		>100µM	-	-	-	-	

Note 1: In Vivo effect- Abolishes macrophages in an *in vivo* rat intradermal study induced by 500ng MCP-1. 300µg IV and 10 mg SQ 30 minutes prior to MCP-1; D-ala (α) is attached to D-asp (β).

Note 2: In same study as Note 1 above, no effect on macrophages seen.

Study Design Table

Group	Animal #	N	RX	RX dose/route T=30 min	Dermal Agonist	Dermal Agonist Dose (ng in 50 ul) T=0	Hour of Sacrifice
1	1,2,3	3	PBS	200 ul: iv 200 ul: SQ-back	PBS LPS MCP-1 MCP-1	0 50 100 500	20-24
2	4,5,6	3	NR58-3.14.3	3 ug: iv 100 ug: SQ back	PBS LPS MCP-1 MCP-1	0 50 100 500	20-24
3	7,8,9	3	NR58-3.14.3	30 ug: iv 1 mg: SQ back	PBS LPS MCP-1 MCP-1	0 50 100 500	20-24
4	10,11,12	3	NR58-3.14.3	300 ug: iv 10 mg: SQ back	PBS LPS MCP-1 MCP-1	0 50 100 500	20-24

Figure 17